

intra-uterine formation it would seem as if the parts had been evolved in a normal manner, and that only at the period when the external genitals came to be developed did a departure from the female structure take place. Instead of the clitoris remaining in size and position comparatively stationary, it increased as would a male organ, but without becoming fully developed into a true penis; while the primary common genital cleft uniting, produced the lengthened perineal raphe.

If this view be the correct one, it adds one more instance to support the opinion which some hold, that between the development of the internal and external genitalia there is a certain amount of independence; for in the above example the inner organs would have been necessarily more or less completely formed before deviation from female sexual character occurred.

Dr. A. Günther read a memoir on the Fishes of the States of Central America, founded upon specimens collected in the fresh and marine waters of various parts of that country by Messrs. Salvin and Godman and Capt. J. M. Dow. The specimens collected, together with a few previously known from the same region, but not contained in this collection, were referred to nearly 300 species.

Dr. Günther called particular attention to the fact that no less than 48 of the marine species, out of a total of 158, from the seas on both sides of the Isthmus of Panama were found to be identical, and stated that this was to be explained only by assuming that, at a former period, one or more open channels existed between the Atlantic and Pacific. He added that, although a long time must have elapsed since this communication was stopped, the specimens examined from opposite coasts of the isthmus were absolutely identical, and that there was no indication that any of these forms had undergone modification or degenerated into a climatic or local variety.

After having defined the zoological characters of Central America, as expressed in its fish-fauna, and subdivided it into six provinces, he proceeded to give full descriptions of the new forms collected by the gentlemen mentioned. Diagnoses of a part of these had been already given in the 'Proceedings' of the Society, 1864, p. 144. The following had not been mentioned before:—

PLECTROPOMA MULTIGUTTATUM.

D. $\frac{11}{20}$. A. $\frac{3}{9}$. L. lat. 75.

Allied to *P. monacanthus*. Præoperculum with two spinous teeth below the angle.

Panama.

CORVINA CHRYSOLEUCA.

D. 10 | $\frac{1}{22-23}$. A. $\frac{2}{9}$. L. lat. 55.

Allied to *C. ronchus*. Second dorsal spine the strongest, third the

longest, as long as the postorbital portion of head. Second anal spine very strong, not much shorter than the third dorsal spine.

Panama.

CORVINA VERMICULARIS.

D. 10 | $\frac{1}{25}$. A. $\frac{2}{8}$.

Interorbital space only one-fourth wider than the orbit, its width being one-fourth of the length of the head. Second dorsal spine scarcely stronger than, and but half as long as, the third, the length of which is nearly equal to that of the postorbital portion of the head and of the second anal spine.

Panama.

OTOLITHUS SQUAMIPINNIS.

D. 8 | $\frac{1}{21-22}$. A. $\frac{2}{10}$. L. lat. 85.

Spinous dorsal fin longer than high, with feeble spines. Coloration uniform.

Panama.

CARANX CANINUS.

D. 8 | $\frac{1}{20}$. A. 2 | $\frac{1}{17}$. L. lat. 24.

Upper teeth in a villiform band, with an outer series of stronger ones; lower teeth in a single series, those in front canine-like; teeth on the vomer, palatines, and tongue. Lateral line slightly bent, the width of the arch being contained once and one-third in the length of the straight portion. Dorsal spines stout and short.

Panama.

HEROS NIGROFASCIATUS.

D. $\frac{18}{8}$. A. $\frac{10}{7}$.

Lower lip interrupted in the middle.

Lakes of Amatitlan and Atitlan.

HEROS MULTISPINOSUS.

D. $\frac{18}{9}$. A. $\frac{11}{7}$.

Lower lip interrupted in the middle. Three series of scales on the cheek.

Lake of Managua.

HEROS LONGIMANUS.

D. $\frac{16}{10}$. A. $\frac{6}{8}$.

Lower lip interrupted in the middle. Pectoral extending nearly to the end of the anal. A large black spot in the middle of the side.

Lake of Nicaragua.

HEROS ERYTHRÆUS.

D. $\frac{17}{12}$. A. $\frac{7}{8}$. L. lat. 31. L. transv. $\frac{6\frac{1}{2}}{14}$.

Lips thick, continuous. The length of the eighth dorsal spine is less than one-third of that of the head. The depth of the free portion of the tail is conspicuously more than its length.

Lake of Managua.

HEROS LOBOCHILUS.

D. $\frac{17}{11-12}$. A. $\frac{7}{8-9}$. L. lat. 32. L. transv. 6/14.

Lips enlarged into lobes. The length of the eighth dorsal spine is more than one-third of that of the head. The depth of the free portion of the tail is scarcely more than its length. Greenish, with blackish cross bands.

Lake of Managua.

HEROS TRIMACULATUS.

D. $\frac{17}{11}$. A. $\frac{6-8}{9}$.

Allied to *H. salvini*. Fold of the lower lip continuous. Three black spots along the side of the body.

Chiapam and Huamuchal.

HEROS MOTAGUENSIS.

D. $\frac{18}{10}$. A. $\frac{7}{8-9}$.

Closely allied to *H. friedrichsthalii*. Fold of the lower lip continuous. Præorbital with the antero-inferior margin but slightly concave, as wide as the orbit. A black interrupted band runs from the eye to a spot situated above the end of the lateral line.

Rio Motagua.

HEROS MANAGUENSIS.

D. $\frac{18}{10}$. A. $\frac{7}{8}$.

Allied to *H. friedrichsthalii*. Fold of the lower lip continuous. Præorbital narrow, scarcely more than half as wide as the orbit. The length of the twelfth dorsal spine contained thrice and two-thirds in that of the head. A series of quadrangular spots runs from the eye to a spot situated above the end of the lateral line.

Lake of Managua.

HEROS OBLONGUS.

D. $\frac{18}{12-13}$. A. $\frac{6}{8-9}$.

Allied to *H. microphthalmus*. Fold of the lower lip continuous; five series of scales on the cheek. The height of body is one-third of the total length (without caudal), the length of the twelfth dorsal spine less than one-third of that of the head. Coloration as in *H. microphthalmus*.

Rio Motagua.

NEETROPLUS, g. n.

Differing from *Heros* in having a front series of flat incisor-like teeth.

NEETROPLUS NEMATOPUS.

D. $\frac{19}{10}$. A. $\frac{8}{7}$.

From Lake Managua.

PIMELODUS MANAGUENSIS.

D. 1/6. A. 14-15. P. 1/9.

Adipose fin rather more than one-third of the total length (without caudal); maxillary barbels extending nearly to the base of the dorsal fin. Dorsal spine very feeble; anal rays not nearly extending to the end of the adipose fin, if laid backwards.

Lake Managua.

CHÆTOSTOMUS ASPIDOLEPIS.

L. lat. 25.

Diameter of the orbit one-third of the width of the interorbital space. Interoperculum with very few short spines. Seven scutes between the two dorsal fins, twelve between anal and caudal.

Veragua.

PRISTIGASTER MACROPS.

D. 13. A. 61. L. lat. 53.

Greatest depth of the body one-third of the total length (without caudal). Eye one-third of the length of the head. Origin of dorsal midway between caudal and scapula.

Panama.

PRISTIGASTER ARGENTEUS.

D. 11. A. 56. L. lat. 51.

Greatest depth of the body two-sevenths of the total length. Eye two-sevenths of the length of the head. Origin of dorsal much nearer to caudal than to scapula.

Panama.

MELETTA PETENENSIS.

D. 14-15. A. 20-23. L. lat. 40.

Distinguished from *M. thrissa* by its larger head, the length of which is two-sevenths of the total (without caudal).

Lake Peten.

MELETTA LIBERTATIS.

D. 17. A. 19. L. lat. 48.

The length of the head is contained thrice and two-thirds in the

total (without caudal). Origin of the dorsal fin much nearer to the snout than to the caudal. No humeral spot.

Libertad.

ENGRAULIS MYSTICETUS.

D. 17. A. 20. L. lat. 42.

The length of the head is contained twice and four-fifths in the total (without caudal).

Panama.

RHINOBATES LEUCORHYNCHUS.

Anterior nasal valve not prolonged to the inner angle of nostril. Disk longer than broad; prænasal part of snout not so long as broad at the base, but longer than the distance between the front extremities of the nostrils. A series of very small tubercles along the middle of the back. Nostrils longer than the space between their posterior extremities, but shorter than the mouth.

Panama.

This memoir will be published entire in the Society's 'Transactions.'